IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	Examiner: PHAM, MICHAEL
TRAN	Art Unit: 2811
Application No.: 10/779,537	
Filed: 2/14/2004	
	APPEAL BRIEF

Commisioner for Patents

PO Box 1450

Alexandria, VA 22313

Sir:

Applicant submits this Appeal Brief in response to the Final Office Action mailed 10-19-2006 and in furtherance of the Notice of Appeal filed 1/16/2007. Please deduct any required small entity fee, pursuant to 37 C.F.R. § 1.17(c) from deposit account 50-1861 or credit any excess fees associated with the Appeal Brief to such deposit account. Appendix A, attached hereto, contains a copy of all claims pending in this case.

REAL PARTY IN INTEREST:

All right, title, and interest in the subject invention and application are assigned to Available for Licensing (AFL), San Jose, CA 95135. Therefore, AFL is the real party interest.

RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

STATUS OF THE CLAIMS

Claims 1-20 were originally presented in the application. Claims 1-20 were rejected. Claims 1-20 are the subject of this appeal. No other claims are pending.

STATUS OF AMENDMENTS

A Final Office Action was mailed on 10/19/2006 and a Notice of Appeal along with a Pre-Appeal Brief was submitted on 1/15/2007. A copy of all the pending claims is provided in Appendix A, attached hereto.

SUMMARY OF CLAIMED SUBJECT MATTER

The invention relates to systems and methods for mapping intellectual property by searching one or more remote databases for one or more relevant patents; and performing network analysis on the relevant patents. Advantages of the invention may include one or more of the following. The system automates the search for identifying relationships among patents. Patents are visually displayed for ease of interpretation. Each patent of interest is annotated, and the annotated document is easier to interpret since relevant information is parsed and visually provided to the user. Further, external information such as information from external documents and file history can be incorporated to ease interpretation (page 4, lines 2-10).

Claim 1 recites a computer-implemented method for mapping intellectual property by searching one or more remote databases for one or more relevant patents (page 4, lines 2-10, page 16, lines 4-16, Fig. 7 blocks 706, among others); and performing a network analysis on the relevant patents and displaying one or more patents (page 4, lines 2-10, page 16, lines 17-21, Fig. 7 block 712, among others).

Claim 14 recites a computer-implemented method for mapping intellectual property, by (a) receiving as a query one or more keywords or assignees to be searched (page 16, lines 4-16, page 17 lines 11-12, Fig. 7, block 702, among others); (b) searching

the query in Issued Patent or Published Application databases (page 17 line 13-15, among others); (c) retrieving cited prior art for each patent found as search results (page 16, lines 4-16, page 17 line 16, among others); (d) updating the query by adding assignees from the cited prior art (page 16, lines 4-16, page 17 line 20-21, among others); (e) iteratively repeating (b)-(d) using the updated query (page 16, lines 4-16; page 17, line 20-21, Fig. 7 block 710, among others); and(f) displaying the intellectual property (page 16, lines 4-16, page 18, lines 9-10, Fig. 7 block 716, among others).

Claim 16 recites a computer-implemented system for mapping intellectual property by means for searching one or more remote databases for one or more relevant patents(page 4, lines 2-10, page 16, lines 4-16, Fig. 7 blocks 706, among others); and means for performing a network analysis on the relevant patents and displaying one or more patents(page 4, lines 2-10, page 16, lines 17-21, Fig. 7 block 712, among others).

Claim 19 recites a computer readable media, executable by a processor, containing executable computer program instructions with: code to receive as a query one or more keywords or assignees to be searched(page 16, lines 4-16, page 17 lines 11-12, Fig. 7, block 702, among others); code to search the query in Issued Patent or Published Application databases (page 17 line 13-15, among others); code to retrieve cited prior art patents for each patent found in search results(page 16, lines 4-16, page 17 line 16, among others); code to update the query by adding assignees from the cited prior art patents (page 16, lines 4-16, page 17 line 20-21, among others); code to run a second search using the updated query(page 16, lines 4-16; page 17, line 20-21, Fig. 7 block 710, among others); and code to perform a network analysis on a search result and to display

the search result(page 16, lines 2-16, page 16 lines 17-21, page 18, lines 9-10, Fig. 7

block 716, among others).

ISSUES

I.   WHETHER CLAIMS 1, 4-7, 11-12 AND 16-17 ARE ANTICIPATED BY
        GRUNE (20030004936).

II.   WHETHER CLAIMS 2, 14-15 AND 18-20 ARE UNPATENTABLE OVER
        GRUNE AND YEH (20040123235).

III.   WHETHER CLAIM 3 IS UNPATENTABLE OVER GRUNE AND
        MUNZNER ("H3: LAYING OUT LARGE DIRECTED GRAPHS IN 3D
        HYPERBOLIC SPACE."

IV.   WHETHER CLAIMS 8-10 AND 13 ARE UNPATENTABLE OVER
        GRUNE AND RIVETTE (6,339,767).

ARGUMENT

I.   CLAIMS 1, 4-7, 11-12 AND 16-17 ARE NOT ANTICIPATED BY GRUNE.

        Claims 1, 4-7, 11-12, and 16-17 were rejected as anticipated by Grune, which

describes a web-enabled tool that allows simultaneous intelligent searching, knowledge

management based problem solving, valuation, and modeling of intellectual property and

scientific information. Page 4 of the Office Action noted that, as to claim 1, Grune

shows:

        A computer-implemented method for mapping intellectual
property[Grune, 0010, search and map patents.], comprising:
        Searching (searching) one or more remote databases (databases) for one or
more relevant patents [Grune, 0027, allows a user to enter a query via a client
computer that is connected to a server on a global area network. Intelligent
searching also provides a user access to the stored intellectual property and
scientific information contained on various databases.]; and
        performing a network analysis (map) on the relevant patents [Grune,
[0048] that the program can be used to map patent citations or patent claims in
hyperbolic tree formats] and

displaying one or more patents (intellectual property)[Grune, [0048] The program allows for simultaneous modeling of the valuation and intellectual property results. The results may be displayed in various graphical formats.].

Applicant respectfully traverses the rejection. A Section 102 rejection requires each and every element to be present. Here, at least the network analysis aspect is missing.

As stated at the bottom of page 16 through top of page 17 of the instant application, one embodiment of network analysis can be as follows:

Network analysis can generate sociograms (network diagrams) to visualize the networks being analyzed. One technique to draft a sociogram is to construct it around the circumference of a circle. The circle helps organize the data, but the order in which the points is determined only by an attempt to keep the number of lines connecting the various points to a minimum. Typically, a trial-and-error drafting process is used until an aesthetically pleasing result is achieved. While such a process can make the structure of relations clearer, the relations between the sociogram's points reflect no specific mathematical properties. The points are arranged arbitrarily and the distances between them are meaningless. A number of techniques (e.g., metric and non-metric multidimensional scaling, correspondence analysis, spring-embedded algorithms, etc.) that mathematically represent the points in space can be used.

Other embodiments of network analysis are discussed on pages 20-24 of the instant application. Further, as defined by the on-line encyclopedia Wikipedia at http://en.wikipedia.org/wiki/Network_analysis:

Network analysis is the analysis of networks through network theory (or more generally graph theory)…Social network analysis maps relationships between individuals in social networks…Link analysis is a subset of network analysis, exploring associations between objects. An example may be examining the addresses of suspects and victims, the telephone numbers they have dialed and financial transactions that they have partaken in in a given timeframe, and the familial relationships between these subjects as a part of police investigation. Link analysis here provides the crucial relationships and associations between very many objects of different types that are not apparent from isolated pieces of information…

In one embodiment of the instant invention, item 9 in the pseudo-code on page 18 of the instant application teaches that "[f]or each patent, create spring relationship among patents based on number of citation of patent prior art. Generate spring mass diagram. Allow user to play with the spring mass. For each patent, he can view each section of the patent, see PDF or TIFF versions."

Grune's paragraph 48 relates to the display of a particular graphical format known as hyperbolic tree. Specifically, Grune discloses that

> The results may be displayed in various graphical formats. Hyperbolic trees allow for the display of information on a hyperbolic plane using a focus plus context technique. The center of the tree is called a root, and the branches of information related to the root are displayed in the hyperbolic plane. The focus is easily shifted to a different part of the hyperbolic tree using a pointer device, such as a mouse, to choose a different root center.

Grune's paragraph thus relates to the display of the result. This correlates to the display operation recited in claim 1 and where, as discussed on page 18 of the instant application, Figs. 8-9 show exemplary displays of IPs that are analogous to Grune' paragraph 0048. As mentioned therein, in the exemplary display of Fig. 8, each patent is represented as a sphere. In Fig. 9, the patents are arranged as hyperbolic trees. However, this is the display part of the system and not the network analysis.

Hence, although Grune's paragraph 0048 discusses displaying patent citations or a patent's claims in hyperbolic tree format, Grune fails to show the claimed network analysis, which involves the application of network theory or graph theory to form relationships between patents.

Grune discloses that a single patent or claim can be placed at the center of the hyperbolic tree and related claims or patents are the branches connected to the root

center. However, the display of the hyperbolic tree does not correspond to the claimed performing a network analysis on the relevant patents and displaying them. For example, in Grune, members of a patent family may be displayed as branches. However, such rote display of patent family members does not correspond to performing a network analysis, which may place

The Final Office Action at page 16 noted that "the applicant has essentially stated that network analysis is not novel by providing a public web definition, embodiments of network analysis being utilized, and further suggesting that the term network analysis is well-known." Applicant disagrees with equating dictionary definition with obviousness. Dictionary definition is commonly used to interpret the meaning of a claim and it is used to interpret the claim language in the response.

The Office Action notes that "it appears that the term network analysis is similar to the term mapping." However, as explained above, Grune' paragraph 48 relates to the display of graphical format, similar to the claimed display operation. However, Grune's hyperbolic tree display is not equivalent to the claimed network analysis of claim 1.

As Grune fails to disclose each and every element of the claim, Grune cannot anticipicate claims 1 and 16 and claims that depend therefrom such as claims 4-7, 11-12 and 17. Withdrawal of the Section 102 rejection is requested.

GRUNE FAILS TO ANTICIPATE THE DEPENDENT CLAIMS

Further, Grune fails to disclose the additional citations of the dependent claims.

Specifically, Grune's paragraph 11 fails to anticipate claim 4 since Grune's breaking sentences into noun-verb-adjective trees and then applying such tools as

synonym indexes is not the same as clusterizing patents according to word similarity. Since at least this element is missing, the rejection must be withdrawn.

Grune'paragraph 60 fails to anticipate claim 5 since Grune's split screen/full screen format is not the same as plotting on a large format plotter. The rejection is fatally deficient on this specific point.

As to claim 6, Grune's paragraph 10's audio/visual means in no way discloses or teaches the specifics of three-dimensionally visualizing the patents on a 3D display device. The rejection is incorrect and should be reversed.

As to claim 11, Grune's Fig. 5 shows an Internet connected computer, but fails to show that the search work being distributed over a plurality of client computer (peer-to-peer (P2P) distribution of search load over a number of client computers). Grune completely fails to show the peer to peer specifics and the rejection is fatally deficient.

As to claim 12, Grune fails to show the peer to peer or P2P distribution of search load, further where the client computer is behind a firewall. Since at least this element is missing, the rejection must be reversed.

As to claim 16, Grune fails to anticipate this claim since it does not show the means for performing network analysis in paragraph 48 as discussed above. Since at least this element is missing, the rejection must be withdrawn.

As to claim 17, Grune's paragraph 48 fails to show the means for generating a computer readable intellectual property mapping file, as discussed above. Further Grune's paragraph 14 fails to disclose the generating means such as computer code for generating a collection of patent documents, each having one or more links embedded in the first portion referencing one or more external documents viewable using a viewer

application; and one or more links embedded in the third portion referencing information contained in the second portion; and links generated by a network analysis of relationships among the patent documents as further shown on claim 18.

Since Grune fails to disclose elements recited in the dependent claims as well as the dependent claims, Grune cannot anticipate any of the claims. Withdrawal of the rejection is respectfully requested.

II.   CLAIMS 2, 14-15 AND 18-20 ARE PATENTABLE OVER GRUNE AND YEH (20040123235).

Claims 2, 14-15 and 18-20 were rejected under Section 103 as unpatentable over Grune in view of Yeh. Yeh shows a system for displaying patent analysis information includes a patent information table, a citation analyzing module, an XML (extensible markup language) converting module, an image converting module, and a user processing module.

With respect to claim 2, Grune does not show network analysis. Grune and Yeh do not show the network analysis and fails to show the specifics recited in claim 2 of receiving as a query one or more keywords or assignees to be searched; searching the query in Issued Patent or Published Application databases;retrieving cited prior art patents for each patent found in search results; updating the query by adding assignees from the cited prior art patents; and running a second search using the updated query. The rejection fails to address each element of claim 2, and thus fails to show that claim 2 is unpatentable over Grune and Yeh.

As to independent claim 14, Grune and Yeh fail to disclose the specific combination of:

(a) receiving as a query one or more keywords or assignees to be searched;

(b) searching the query in Issued Patent or Published Application databases;

(c) retrieving cited prior art for each patent found as search results;

(d) updating the query by adding assignees from the cited prior art;

(e) iteratively repeating (b)-(d) using the updated query.

The Office Action acknowledged that "Grune does not explicitly disclose (c) retrieving cited prior art for each patent found as search results and relied on Yeh at 0038 which shows that a citation analysis module is used to generate citation information of a designated patent according to patent summary information stored in the patent information table." However, Yeh shows only citation information and does not show that cited patents are retrieved. Thus, the Office Action takes liberty with what Yeh shows and impermissibly uses hindsight from the present invention to arrive at its conclusion. Further, the Office Action asserts baldly that Grune in combination with Yeh discloses:

> (d) updating the query by adding assignees from the cited prior art;
> (e) iteratively repeating (b)-(d) using the updated query; and
> (f) displaying the intellectual property.
> Grune discloses that after information related to query is retrieved, data is sent to SIPS-VSM's utilities [0011]. Which further filters the results of the query such as grouping a result according to subject, publication date, assignee (adding assignee), etc. Grune further discloses, 0015, refined query (updated query), running a search again (repeating using updated query). Grune further discloses [0048] The program allows for simultaneous modeling of the valuation and intellectual property (intellectual property) results. The results may be displayed (display) in various graphical formats.

Applicant has carefully reviewed Grune and Yeh and fails to see how paragraphs 11, 14 and 48 show that the computer automatically performs updating the query by adding assignees from the cited prior art and iteratively repeating (b)-(d) using the updated query. Such iterative searches are used to improve the accuracy of the search result.

As a number of elements in the combination are completely missing in Grune and Yeh, they cannot render the independent claims obvious. Further, Grune and Yeh fails to show the specifics recited in the dependent claims.

As to claim 15, as discussed earlier, Grune does not show the network analyzing the search results. As to claim 18, the examiner improperly used hindsight to reconstruct the invention. This is the case since the claim relates to a patent document (in one instance a PDF document) with three portions. In one embodiment, the PDF patent document contains a prior art citation in the first section with links to the prior art, a description portion and a claim portion, where the claims contain links to references to the claim language in the description portion. The decision on claim 15 should be reversed.

The Office Action misconstrued claim 18, and then goes on a fanciful reconstruction on that incorrect construction of the claim. Yeh clearly does not disclose the element recited in claim 18. The rejection should be reversed.

As to claim 19, as discusssed above for claim 14, Grune and Yeh fail to show the elements recited in claim 14 and 19. As to claim 20, Grune's Fig. 5 merely shows conventional client and server architecture and does not show claim 20's distributed processing such as the peer-to-peer distributed processing, for example. As discussed

earlier, nowhere in Grune or Yeh does it show the peer-to-peer distributed processing.
Hence, the rejection should be withdrawn.

In sum, many of the specifics cited in the dependent claims are not shown.
Hence, withdrawal of the Section 103 rejection is requested.

III.   CLAIM 3 IS PATENTABLE OVER GRUNE AND MUNZNER ("H3:
        LAYING OUT LARGE DIRECTED GRAPHS IN 3D HYPERBOLIC
        SPACE."

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Grune
and further in view of Munzer. Again, as discussed above, neither Grune nor Munzer
shows the network analysis element in the independent claims. Further, Munzer fails to
show creating spring relationship among patents based on number of citation of patent
prior art; and generating a spring mass diagram. There is no suggestion of the specifics
of using citation as the basis for creating the spring relationship. Such suggestion came
from the teachings of the present invention, and the Office Action has improperly applied
hindsight in combining Grune and Munzer to arrive at claim 3. Withdrawal of the
Section 103 rejection on claim3 is requested.

The Office Action cannot use hindsight to assemble the invention from a
catalogue of parts made up of individual elements of the prior art devices, nor can the
Office reconstruct or modify any of the prior art devices in light of the instant invention
and then use such reconstructed or modified devices as evidence that the invention was
obvious. The fact that a prior art apparatus may be capable of being modified to run the
way claimed by the reference does not render the invention obvious where there is no

suggestion or motivation in the prior art references to do so. In re Stencil, 828 F.2d 751, 755, 4 U.S.P.Q.2d 1071 (Fed. Cir. 1987); In re Corkill, 771 F.2d 1496, 1500, 226 U.S.P.Q. 1005, 1009-10 (Fed. Cir. 1985); Bio-Rad Laboratories, Inc v. Nicolet Instrument Carp., 739 F.2d 604, 222 U.S.P.Q. 654 (Fed. Cir. 1984) cert. denied, 469 U.S. 1038 (1984).

IV.   CLAIMS 8-10 AND 13 ARE PATENTABLE OVER GRUNE AND
         RIVETTE (6,339,767).

The Office Action rejected claims 8-10 and 13 over Grune and Rivette. The Office Action asserted that Rivette discloses a caching sub-system that caches/retrieves cached patent data and asserts that such caching is the same as the claimed caching results from prior IP maps in a remote computer. Rivette shows an enterprise server with a local cache rather than remote client computers that performs caching of the IP data in a peer-to-peer context.

First, claims 8-10 and 13 are patentable over Grune and Rivette as they depend from allowable claim 1.

As to claim 8, Grune and Rivette fail to show caching at a remote client computer.

As to claim 9, Grune and Rivette fail to show retrieving a cached IP map from the remote client computer in response to a user request.

Further, as to claim 10, Grune and Rivette fails to mention cache flushing at all.

As to claim 13, Grune and Rivette fail to show the combination of annotating a patent at a local computer and caching the annotated patent at a remote computer to

satisfy a subsequent request for the patent. Withdrawal of the Section 103 rejection is requested.

As discussed above, there is no suggestion to modify Grune to arrive at the invention as claimed. Grune and the Yeh, Munzner, and Rivette references do not teach or suggest all the claim limitations in the independent claims as well as each dependent claims. Since the teaching or suggestion to make the claimed combination and the reasonable expectation of success is not found in the cited references, there is an inference that it came from Applicants' disclosure. Thus, Grune, Yeh, Munzner, and Rivette cannot render obvious the independent claim and those claims dependent therefrom. Moreover, they are allowable since the refeences do not show the specifics as recited in the dependent claims.

Appellant points out that the Examiner bears the initial burden of factually establishing and supporting any *prima facie* conclusion of obviousness. *In re Rinehart*, 189 U.S.P.Q. 143 (CCPA 1976); M.P.E.P. § 2142. If the Examiner does not produce a *prima facie* case, the Applicant is under <u>no</u> obligation to submit evidence of nonobviousness. *Id.* In the instant case, the Examiner has not pointed to <u>any</u> evidence in Marsh, or how knowledge of those skilled in the art, provide a suggestion or motivation to modify the reference teaching so as to produce the claimed invention of independent claim 1. See *In re Zurko*, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001) ([I]n a determination of patentability .... the Board cannot simply reach conclusions based on its understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings).

Under *Vaeck*, absent any evidence of a cited suggestion or reasonable motivation in the Grune reference, or knowledge of those skilled in the art, for modifying Grune to arrive at claims 1-20, *prima facie* obviousness of these claims has not been established. As such, it is respectfully requested that the § 103(a) rejection of all claims be withdrawn and the claims be allowed.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 408-528-7490.

Respectfully submitted,

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CLAIM APPENDIX

1. (Currently Amended) A <u>computer-implemented</u> method for mapping intellectual property, comprising:

    searching one or more remote databases for one or more relevant patents; and

    performing a network analysis on the relevant patents <u>and displaying one or more patents</u>.

2. (Original) The method of claim 1, further comprising

    receiving as a query one or more keywords or assignees to be searched;

    searching the query in Issued Patent or Published Application databases;

    retrieving cited prior art patents for each patent found in search results;

    updating the query by adding assignees from the cited prior art patents; and

    running a second search using the updated query.

3. (Original) The method of claim 1, further comprising:

    for each patent, creating spring relationship among patents based on number of citation of patent prior art; and

    generating a spring mass diagram.

4. (Original) The method of claim 1, further comprising clusterizing patents according to word similarity.

5. (Original) The method of claim 1, further comprising generating a visualization of the patents for display on a screen or plotting on a large format plotter.

6. (Original) The method of claim 1, further comprising three-dimensionally visualizing the patents on a 3D display device.

7. (Original) The method of claim 1, further comprising allowing a user to review the search result and revise the query.

8. (Original) The method of claim 1, further comprising caching results from prior IP maps in a remote computer.

9. (Original) The method of claim 8, further comprising retrieving a cached IP map in response to a user request.

10. (Original) The method of claim 8, further comprising periodically flushing cached IP maps to ensure a fresh IP map.

11. (Original) The method of claim 1, further comprising distributing a search over a plurality of client computers.

12. (Original) The method of claim 11, wherein one of the client computers is located behind a firewall, further comprising bypassing the firewall in sending distributed search results to a remote computer.

13. (Original) The method of claim 1, further comprising annotating a patent at a local computer and caching the annotated patent at a remote computer to satisfy a subsequent request for said patent.

14. (Currently Amended) A <u>computer-implemented</u> method for mapping intellectual property, comprising:

 (a) receiving as a query one or more keywords or assignees to be searched;

 (b) searching the query in Issued Patent or Published Application databases;

 (c) retrieving cited prior art for each patent found as search results;

 (d) updating the query by adding assignees from the cited prior art; ~~and~~

 (e) iteratively repeating (b)-(d) using the updated query<u>; and</u>

 <u>(f) displaying the intellectual property</u>.

15. (Original) The method of claim 14, further comprising network analyzing the search results.

16. (Currently Amended) A <u>computer-implemented</u> system for mapping intellectual property, comprising:

means for searching one or more remote databases for one or more relevant patents; and

means for performing a network analysis on the relevant patents <u>and displaying one or more patents</u>.

17. (Original) The system of claim 16, further comprising means for generating a computer-readable intellectual property mapping file.

18. (Original) The system of claim 17, wherein the IP mapping file comprises:

a collection of patent documents, each having one or more links embedded in the first portion referencing one or more external documents viewable using a viewer application; and one or more links embedded in the third portion referencing information contained in the second portion; and

links generated by a network analysis of relationships among the patent documents.

19. (Currently Amended) A computer readable media<u>, executable by a processor,</u> containing executable computer program instructions ~~which when executed on a digital processing system causes the system to perform a method~~ comprising:

<u>code to receive</u> ~~receiving~~ as a query one or more keywords or assignees to be searched;

<u>code to</u> ~~searching~~ the query in Issued Patent or Published Application databases;

code to retrieve ~~retrieving~~ cited prior art patents for each patent found in search results;

code to update ~~updating~~ the query by adding assignees from the cited prior art patents;

code to ~~running~~ a second search using the updated query; ~~amd~~ and

code to ~~performing~~ a network analysis on ~~the~~ a search results and to display the search result.

20. (Currently Amended) The media of claim 19, further comprising code ~~instructions~~ to distribute the processing over a plurality of computers.

EVIDENCE APPENDIX

      NONE

RELATED PROCEEDINGS APPENDIX

      NONE